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EXAMINER	
NEWVILLE, TONI E	
ART UNIT	**PAPER NUMBER**
3671	

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/518,209	APPLEFORD ET AL.	
	Examiner	Art Unit	
	Toni Newville	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-18 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 12/16/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation "means to calculate the best place to store or dispose of a particular fluid" recited in lines 3-4 is merely mentioned as stated in the specification, and is not described in any clarifying detail. Moreover, the term "best place" is vague and indefinite as the "best place" for something is subjective and may vary from person to person or company to company.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5, 7, 10-13, 17 and 18 are objected to because of the following informalities: the use of the terms "fluids" and "fluid" lacks antecedent basis. It is unclear to the examiner whether the "fluid" must be hydrocarbon production fluid from the wells, or if it may be any fluid known in the subsea drilling and production arts

(hydraulic fluid, hydrate inhibitors, etc.). In this office action, the examiner is interpreting "fluid" to generally refer to hydrocarbon production fluid. Appropriate correction is required.

5. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 5-10, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Zimmerman et al., US 20020040783.

Regarding claim 1, Zimmerman discloses a system for extracting subsea hydrocarbon fluid comprising at least three discrete subsea developments for hydrocarbon extraction and a hydrocarbon receiving facility linked by a pipeline network configured to permit:

- Diversion of fluid from at least one of the subsea developments (20) selectively to one or more of the said other developments (paragraph 32 lines 1-8); and
- Conveyance of fluid from each of the subsea developments to the receiving facility (paragraph 32 lines 1-8).

Regarding claim 2, the pipeline network of the system as disclosed regarding claim 1 is also configured to permit conveyance of fluid from at least one of the subsea developments (20) to the receiving facility selectively via at least two alternative routes (Fig. 1).

Regarding claim 3, the system of claim 1 further comprises a plurality of receiving facilities (72 and facility mentioned in paragraph 32 line 6-8).

Regarding claim 5, Zimmerman discloses control means (526, 528) for controlling flows of fluids between the subsea developments and between the subsea developments and at least one of the receiving facilities (paragraph 66 lines 6-13).

Regarding claim 6, Zimmerman discloses the control means (526, 528) comprising a monitoring means (565) for monitoring parameters pertaining to at least one of the subsea developments (paragraph 73 lines 8-23).

Regarding claim 7, the control means (526, 528) comprises signal processing means located at the subsea developments when docked at the subsea developments (paragraph 7 lines 10-14), wherein the subsea developments communicate thereby and control, at least to a limited extent, the distribution of fluids around the pipeline network (paragraph 66 lines 6-12).

Regarding claim 8, the control means is arranged to operate by automatically sensing what items of hardware (603) are in use at a particular subsea development (paragraph 64 lines 2-7).

Regarding claim 9, the hardware (603) of claim 8 comprises an electronic chip containing identification information (paragraph 75 lines 1-4).

Regarding claim 10, the system of claim 5 further includes a remote input/receiving device for effecting control of the flow of the fluids (paragraph 65 lines 18-20).

Regarding claim 14, the system of claim 3 further comprises a network of power lines (80) between the subsea developments and each receiving facility for distributing power (paragraph 32 lines 8-10).

Regarding claim 15, the system of claim 3 further comprises a network of control lines (80) between the subsea developments and each receiving facility for transmitting control signals (paragraph 32 lines 8-10).

8. Claims 1-3, 5-10, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Collins, US 4052703.

Regarding claim 1, Collins discloses a system for extracting subsea hydrocarbon fluid comprising at least three discrete subsea developments for hydrocarbon extraction and a hydrocarbon receiving facility linked by a pipeline network configured to permit:

- Diversion of fluid from at least one of the subsea developments (12) selectively to one or more of the said other developments (see pipelines L in Fig. 1); and
- Conveyance of fluid from each of the subsea developments to the receiving facility (column 5 lines 16-18).

Regarding claim 2, the pipeline network of the system as disclosed regarding claim 1 is also configured to permit conveyance of fluid from at least one of the subsea developments (12) to the receiving facility selectively via at least two alternative routes (Fig. 1).

Regarding claim 3, the system of claim 1 further comprises a plurality of receiving facilities (12).

Regarding claim 5, Collins discloses control means (41-50) for controlling flows of fluids between the subsea developments and between the subsea developments and at least one of the receiving facilities (column 8 line 65 – column 9 line 2).

Regarding claim 6, Collins discloses the control means (41-50) comprising a monitoring means (100) for monitoring parameters pertaining to at least one of the subsea developments (column 9 lines 58-63).

Regarding claim 7, the control means (41-50) comprises signal processing means (44) located at the subsea developments, wherein the subsea developments communicate thereby and control, at least to a limited extent, the distribution of fluids around the pipeline network (column 8 line 65 – column 9 line 2).

Regarding claim 8, the control means (41-50) is arranged to operate by automatically sensing what items of hardware (42, 43) are in use at a particular subsea development (column 8 lines 33-42).

Regarding claim 9, the hardware (42, 43) of claim 8 comprises an electronic chip containing identification (paragraph 75 lines 1-4).

Regarding claim 10, the system of claim 5 further includes a remote input/receiving device for effecting control of the flow of the fluids (column 8 line 65 – column 9 line 2).

Regarding claim 14, the system of claim 3 further comprises a network of power lines (column 8 lines 22-28) between the subsea developments and each receiving facility for distributing power.

Regarding claim 15, the system of claim 3 further comprises a network of control lines between the subsea developments and each receiving facility for transmitting control signals (column 7 lines 60-63).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 4, 11, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al., US 20020040783, and Collins, US 4052703, in view of Talley, US 3590919.

Regarding claims 4, 11 and 12, Zimmerman discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells as described above regarding claim 1, including subsea developments (20) connected by a pipeline network (70). Zimmerman fails to disclose the subsea developments (20) comprising separating means for separating fluid received by the subsea development into constituent components and plural pipelines for conveying the separated fluids.

Similarly, Collins discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells as described above regarding claim 1, including subsea developments (12) connected by a pipeline network (L). Collins fails to disclose the subsea developments (12) comprising separating means for separating fluid received by the subsea development into constituent components and plural pipelines for conveying the separated fluids.

Like Zimmerman and Collins, Talley discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells, including subsea developments (12) connected by a pipeline network (16). Unlike Zimmerman and Collins, Talley discloses the subsea developments (12) comprising a separator (32) for separating the hydrocarbon fluid into its constituent phases (claim 12). Talley further discloses plural pipelines (44, 52) for conveying the hydrocarbon gas and hydrocarbon liquid (claim 4).

Talley also discloses calculating the best place to store or dispose of a particular separated fluid by either holding fluid at the separator to maintain separator levels or transporting it to a facility (column 7 lines 5-15) (claim 11).

Given the suggestion in Talley, it would have been obvious to one of ordinary skill in the art to include a separating means and corresponding plural pipelines in the systems of Zimmerman and Collins for conveying the separated hydrocarbons to improve the efficiency of pipelining the hydrocarbons to the receiving facility.

Regarding claim 16, Zimmerman discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells as described above regarding claim 3, including subsea developments (20) connected by a pipeline network (70). Zimmerman fails to disclose the system further comprising a network of chemical injection lines between the subsea developments and the receiving facility.

Similarly, Collins discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells as described above regarding claim 3, including subsea developments (12) connected by a pipeline network (L). Collins fails to disclose the system further comprising a network of chemical injection lines between the subsea developments and the receiving facility.

Like Zimmerman and Collins, Talley discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells, including subsea developments (12) connected by a pipeline network (16). Unlike Zimmerman and Collins, Talley discloses

chemical injection lines (column 4 lines 4-12) between the subsea developments and the receiving facility.

Given the suggestion in Talley, it would have been obvious to one of ordinary skill in the art to include chemical injection lines in the system of Zimmerman and Collins because chemical injection is commonly used in the subsea hydrocarbon production arts to prevent hydrate formation and ensure proper hydrocarbon flow.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al., US 20020040783, and Collins, US 4052703, in view of Milberger, US 4378848.

Zimmerman discloses a system for extracting subsea hydrocarbon fluid as described above with respect to claim 1, including a pipeline network (70) and subsea developments (20). Zimmerman fails to disclose the subsea developments (20) comprising a manifold connected to the pipeline network, and a retrievable module docked with the manifold.

Similarly, Collins discloses a system for extracting hydrocarbon fluid from a plurality of subsea wells as described above regarding claim 1, including subsea developments (12) connected by a pipeline network (L). Collins fails to disclose the subsea developments (20) comprising a manifold connected to the pipeline network, and a retrievable module docked with the manifold.

Like Zimmerman and Collins, Milberger discloses a system for extracting subsea hydrocarbon fluid, including subsea developments (generally 11a, 11b) linked by a pipeline network (23). Unlike Zimmerman and Collins, Milberger further discloses the subsea developments comprising a manifold (10) connected to the pipeline network (23), and a retrievable module (84a; column 3 line 68 – column 4 line 4) having equipment for acting on fluid received thereby, the module (84a) being docked with the manifold for fluid connection to the pipeline network (Fig. 1).

Given the suggestion in Milberger, it would have been obvious to one of ordinary skill in the art to include a manifold with a retrievable module thereon on the subsea developments of Zimmerman and Collins to allow for additional selective control of fluid movement between subsea developments, thereby improving the adjustability of the system.

12. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al., US 20020040783, and Collins, US 4052703, in view of Talley, US 3590919, and further in view of Giannesini, US 5390743.

Regarding claim 17, Zimmerman and Talley disclose a combination of methods for operating a system for extracting subsea hydrocarbon fluid, the system comprising plural discrete subsea developments (Zimmerman; 20) for hydrocarbon extraction and a hydrocarbon receiving facility linked by a pipeline network (Zimmerman; 70) and control means for controlling flows of fluids between the subsea developments and between the

subsea developments and the receiving facility, the control means comprising monitoring means for monitoring parameters pertaining to the subsea developments, the method comprising the steps of:

i) Monitoring parameters at a first subsea development and identifying a requirement for a first fluid type (Talley; column 7 lines 10-15)

ii) Monitoring parameters at a second subsea development and identifying a surplus of the first fluid type.

Similarly, Collins and Talley disclose a combination of methods for operating a system for extracting subsea hydrocarbon fluid, the system comprising plural discrete subsea developments (Collins; 12) for hydrocarbon extraction and a hydrocarbon receiving facility linked by a pipeline network (Collins; L) and control means for controlling flows of fluids between the subsea developments and between the subsea developments and the receiving facility, the control means comprising monitoring means for monitoring parameters pertaining to the subsea developments, the method comprising the steps described above.

The combination fails to disclose operating the control means to convey a quantity of the first fluid from the second to the first subsea development via the pipeline network.

Like the combinations, Giannesini discloses a method of operating a system for extracting subsea hydrocarbon fluid, including monitoring parameters at a subsea development and identifying a requirement for a gas injection amount (column 5 line 64 – column 6 line 2), and monitoring parameters at a second location and identifying a surplus of injection gas (column 5 lines 26-34). Unlike the combinations, Giannesini further discloses operating a control means to convey a quantity of the gas from the second location to the subsea development via a pipeline network (column 6 lines 13-26).

Given the suggestion in Giannesini, it would have been obvious to one of ordinary skill in the art to convey a quantity of first fluid from a second to a first subsea development via the pipeline network (Zimmerman; 70) of the combinations to allow for a simple and efficient method of injecting fluids into the subsea developments.

Regarding claim 18, Talley further discloses the system of the combination comprises plural receiving facilities (Talley; 20 and 24) and at least one of the subsea developments comprises separating means (Talley; 12) for at least substantially separating constituent components of fluid received by the development from each other, the method comprising the steps of:

i) at least substantially separating fluid received by the subsea developments into first and second fluid types (Talley; abstract lines 3-8);

ii) conveying the first fluid type to one of the receiving facilities (Talley; column 2 lines 62-64)

iii) conveying the second fluid type to another of the receiving facilities (Talley; column 2 lines 65-68).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toni Newville whose telephone number is (571) 272 - 1548. The examiner can normally be reached on Monday - Friday 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toni Newville
January 18, 2006

THOMAS B. WILL
Supervisory Patent Examiner
Group 3600